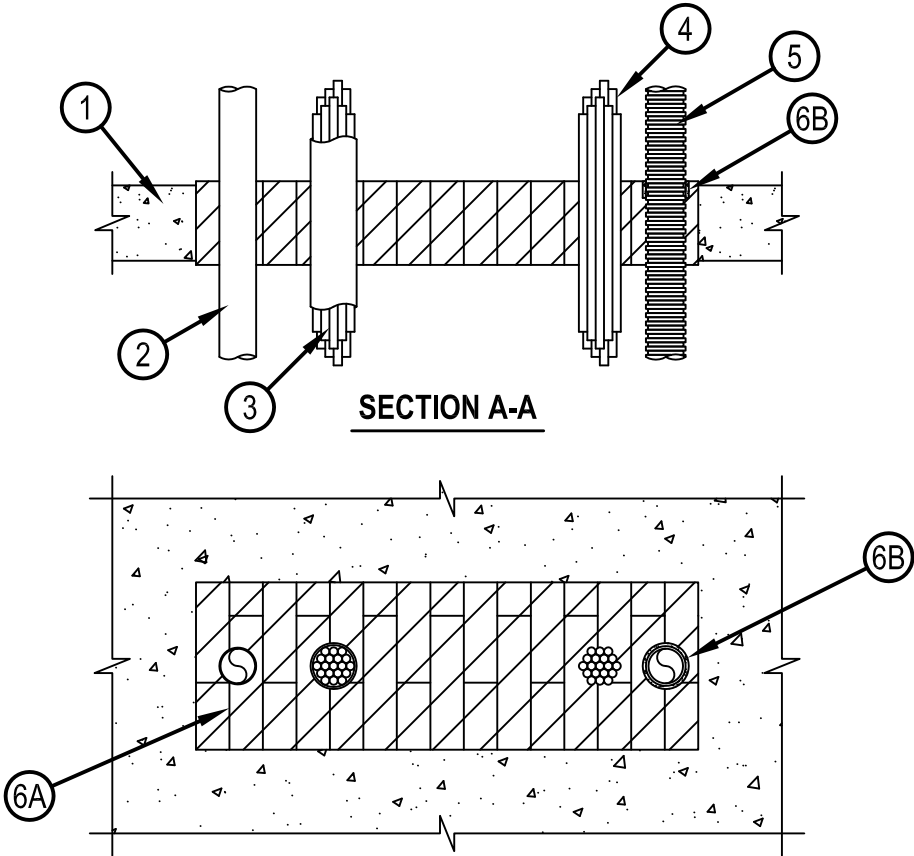


System No. C-AJ-8107



ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Ratings - 3/4, 1, 1-3/4 and 3 Hr (See Items 2, 3, 4 and 5)	FT Ratings - 3/4, 1, 1-3/4 and 3 Hr (See Items 2, 3, 4 and 5)
	FH Rating — 3 Hr
	FTH Ratings - 3/4, 1, 1-3/4 and 3 Hr (See Items 2, 3, 4 and 5)



System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete floor or concrete wall. Wall may also be constructed of any solid or filled UL Classified Concrete Blocks*. Max area of 300 sq. in. (1935 cm2) with max dimension of 30 in. (762 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Electrical Metallic Tubing — Nom 2 in. (51 mm) diam (or smaller) steel electrical metallic tubing (EMT), or steel conduit. The min space between adjacent penetrants shall be 3 in. (76 mm). Tubing or conduit to be rigidly supported on both sides of floor assembly. When EMT is used, the T, FT and FTH Ratings are 3/4 Hr.

3. Cable — 1800 pair - No. 24 AWG 01 ARMM telephone cable with polyvinyl chloride (PVC) insulation and jacket. The min space between adjacent penetrants shall be 3 in. (76 mm). Cable to be rigidly supported on both sides of floor assembly. When 1800 pair cable is used, the T, FT and FTH Ratings are 1 Hr.



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4. Cables — Max 3 in. (76 mm) diam tightly bundled cable bundle. The minimum space between adjacent penetrants shall be 1-1/2 in. (38 mm). Cables to be rigidly supported on both sides of wall assembly.
 - A. Max 300 pair No. 24 AWG copper telephone cables with polyvinyl chloride (PVC) insulation and jacket materials. When 300 pair cable is used, the T, FT and FTH Ratings are 1 Hr.
 - B. Max 7/C No. 12 AWG cable with PVC insulation and jacket materials. When 7/C No. 12 cable is used, the T, FT and FTH Ratings are 1 Hr.
 - C. Multiple fiber optical communication cables with PVC jacket material and having a max outside diameter of 1/2 in. (13 mm). When fiber optic cable is used, the T, FT and FTH Ratings are 1-3/4 Hr.
5. Optical Fiber/Communication Cable Raceways+ — Nom 2 in. (52 mm) diam (or smaller) optical fiber raceway, formed from polyvinyl chloride (PVC). Raceway to be installed in accordance with the National Electrical Code (NFPA No. 70). The min space between adjacent penetrants shall be 3 in. (76 mm). Raceway to be rigidly supported on both sides of floor assembly. When raceway is used, T Rating is 3 Hr.
See Optical Fiber/Communication Cable Raceways (QAZM) category in the Electrical Construction Materials Directory for names of manufacturers
6. Firestop System — The annular space between the individual penetrants and the periphery of the opening shall be min 1/2 in. (13 mm) to max 11-1/4 in. (286 mm). The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Material* — Blocks firmly packed within opening with 5 in. (127 mm) dimension projecting through and centered within opening. Either one or a combination of the block types specified below may be used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block
 - B. Fill, Void or Cavity Material* — Wrap Strip - (Optional) - Nom 3/16 in. (4.8 mm) thick by 1 in. (25 mm) wide intumescent wrap strip. One layers of wrap strip is individually wrapped around raceway with ends butted and held in place with tape. Wrap strip installed flush with top surface of block in floor assemblies or both surfaces of fire block in wall assemblies.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E- W25/1" Wrap Strip
 - C. Fill, Void or Cavity Material* — Fill material to be forced into interstices of cables, between cables and cable tray and in obvious openings between blocks and between blocks and the periphery of the opening to the max extent possible on both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP618 Firestop Putty Stick or CP620 Fire Foam
 - D. Wire Mesh-(Not Shown) — When the annular space exceeds 4 in. (102 mm) between penetrants or between penetrants and the periphery, a nom 2 in. (51 mm) by 2 in. (51 mm) wire fencing shall be used to keep the blocks in place. The wire fencing shall be fabricated from min No. 16 SWG (0.060 in.) (1.52 mm) galv steel wire. The wire is cut to fit the contour of the penetrating items with a min 3 in. (76 mm) overlap beyond the periphery of the opening. Wire fencing secured to top surface of floor and both surfaces of the wall assembly by means of 1/4 in. (6 mm) diam by 1 in. (25 mm) long concrete anchors and 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam fender washers spaced max 8 in. (203 mm) OC.

+Bearing the UL Listing Mark

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

